

Rejection of Claim 1

Claim 1 is directed to an industrial truck having a plurality of wheels, a load lifting system, and a drive system. The truck also includes a stabilizing device comprising a plurality of wheel load sensors, with each load sensor connected to an individual wheel and configured to measure a wheel load. The load sensors are connected to a monitoring device which is configured to control or regulate the load lifting system and/or the drive system of the truck based on the wheel load sensor data. At least two wheels of the truck have a speed-of-rotation sensor connected to the monitoring device. At least one wheel on the front axle of the truck has a wheel bearing with an integrated wheel load sensor.

Avitan is directed to a stabilization system having a rear steer wheel 34 with an annular weight load transducer 86 that generates a signal indicative of the axial weight load on the rear wheel.

Anderson is directed to an articulated boom system 10 having an articulated boom 12 mounted on a base or truck 14 having hydraulically driven outriggers or support legs 30, 32, 34, and 36. The articulated boom 12 is mounted on a rotatable turret 16. A load sensor 40 is positioned on the leading end 46 of the articulated boom 12 to measure the weight of a load on the leading end 46. Data from the load sensor 40, a boom position sensor 42, and outrigger extension sensors 44 are used to calculate a center of gravity for the boom 12 and calculate a moment. When the moment approaches a tipping situation, a computer 102 shuts down operation of the articulated boom system 10 (Anderson at column 8, lines 29-34 and lines 64-67).

While the Examiner acknowledges that Avitan does not teach specific limitations of the claimed invention, the Examiner relies upon Anderson for disclosing these limitations and contends that one of ordinary skill in the art would find obvious to combine

the features of Anderson with those of Avitan to arrive at the claimed invention. Applicants respectfully disagree not only with the Examiner's characterization of the teachings of Anderson but also with the claim rejections based on the Avitan/Anderson combination.

Specifically, in paragraph 3 of the Office Action, the Examiner states "...Anderson et al. discloses a stabilizing device configured to prevent tipping of the truck and comprising a plurality of wheel load sensors, each load sensor connected to an individual wheel and configured to measure a wheel load (see columns 2-3, lines 39-6; and columns 3-4, lines 32-10)." Applicants respectfully disagree with this characterization. Anderson does not teach a truck having a plurality of wheel load sensors. In fact, the Anderson device has no wheels at all, but rather just legs or outriggers 30-36. Additionally, Anderson does not teach that each load sensor is connected to an individual wheel. Firstly, the Anderson device has no wheels. Additionally, the only load sensor on the Anderson device is connected to the leading end 46 of a boom 12 to sense the weight carried on the end of the boom to be used as one component in calculating a tipping situation for the base 14. Additionally in paragraph 3 (sentence bridging pages 2 and 3) of the Office Action, the Examiner states that Anderson discloses a monitoring device "...and load sensors are connected to the monitoring device to control or regulate at least one of the load lifting system and the drive system (see columns 5-7, lines 40-18)." Again, Applicants respectfully disagree. The Anderson device, in each of its embodiments, has only one load sensor 40 or 240 (Figs. 1 and 3) to measure the load on the leading end of the articulated boom.

In paragraph 3 (page 4) of the Office Action, the Examiner also states that Anderson discloses "...a speed of rotation sensor connected to the monitoring device (see columns 10-11, lines 42-36)." Again, Applicants respectfully disagree. The rotation sensor indicated by the Examiner appears to be for rotation of the turret 16 or 216 to horizontally rotate or position the boom. Anderson does not teach or suggest an industrial truck in which

at least two wheels have a speed-of-rotation sensor connected to a monitoring device, as claimed in claim 1. As discussed above, the Anderson device has no wheels at all.

Finally, in paragraph 3 (page 4) of the Office Action, the Examiner states that Anderson discloses "...at least one wheel on the front axle of the truck has a wheel bearing with an integrated wheel load sensor (see column 8, lines 6-68)." Applicants respectfully disagree. Anderson does not disclose a truck having at least one wheel on the front axle since the Anderson truck or "base" has no wheels. Additionally, Applicants have reviewed the portion of Anderson cited by the Examiner for this teaching and do not believe Anderson, at the cited location or anywhere else, teaches a wheel bearing with an integrated wheel load sensor, as claimed in claim 1. Therefore, even if one were to combine the teachings of Avitan and Anderson, they would not result in the claimed invention. The structural features of Anderson which the Examiner relies upon to combine with Avitan to allegedly arrive at the claimed invention are simply not taught by Anderson. Therefore, claim 1 is not rendered obvious by the Avitan and Anderson combination and is believed allowable over the cited prior art and in condition for allowance. Reconsideration of the rejection of claim 1 is respectfully requested.

Rejections of Claims 2, 3, 5, and 7-15

Claims 2, 3, 5, and 7-15 depend either directly or indirectly from, and add further limitations to, claim 1. Since these claims depend from a claim believed to be in condition for allowance, these claims are also believed to be in condition for allowance.

Additionally, with respect to claims 3 and 12, the Examiner states (Office Action at page 3) "...Anderson et al. mention wheel load sensors are provided on all the wheels of the truck (see the abstract)." This is incorrect. As described above, the Anderson device has no wheels at all and does not disclose wheel load sensors.

With respect to claim 7, the Examiner states (Office Action at page 4) "...Anderson et al. mention speed of rotation sensor is integrated into a wheel bearing (see columns 10-11, lines 42-36)." Applicants respectfully disagree. The Anderson device has no wheels and, therefore, no speed-of-rotation sensor integrated into a wheel bearing. The rotation sensor described in the portion of Anderson cited by the Examiner is for the turret 16 which rotates the base of the boom 12 to position the boom.

With respect to claim 11, the Examiner states (Office Action at page 4) "...Anderson et al. mention speed of rotation sensor are located on the same axle (see column 10, lines 1-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan by mention speed of rotation sensor are located on the same axle for stabilizing the truck monitoring device." Applicants respectfully disagree. The rotation sensor mentioned by Anderson is for the turret, not for any wheels. Therefore, even if the Anderson device were combined with that of Avitan, it would not result in speed-of-rotation sensors located on the same axle but rather in a speed-of-rotation device located on a turret to horizontally rotate the lifting device of Avitan.

With respect to claim 13, the Examiner states (Office Action at page 4) "...Anderson et al. mention at least one wheel on each side of a front axle of the truck has a wheel bearing with an integrated wheel load sensor (see column 8, lines 6-67)." Again, Applicants respectfully disagree. Firstly, the Anderson device has no wheels. Additionally, the Anderson device has no front axle. Moreover, the Anderson device does not teach or suggest that the Anderson base has a wheel bearing with an integrated wheel load sensor.

Therefore, for all of the above reasons, Applicants do not believe claims 2, 3, 5, or 7-15 are rendered obvious by the Avitan and Anderson combination. Reconsideration of these rejections is respectfully requested.

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Conclusion

In view of the above remarks, reconsideration of the rejections and allowance of all of claims 1-3, 5, and 7-15 are respectfully requested.

Respectfully submitted,

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